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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,485	06/18/2001	Ullrich Sakowsky	927-076US (09685 US)	1196

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PHILADELPHIA, PA 19103

EXAMINER

DEJESUS, LYDIA M

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,485

Applicant(s)

SAKOWSKY ET AL.

Examiner

Lydia M. De Jesús

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed June 18, 2001 has been placed of record and the references cited therein have been considered.

Election/Restrictions

3. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A, corresponding to the embodiment illustrated in Figures 1a, 1b and 2.

Species B, corresponding to the embodiment illustrated in Figure 3.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 3, 4 and 5 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after

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the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with William Schwarze on September 23, 2002 a provisional election was made without traverse to prosecute the invention of Species A, claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On claim 4, the limitation “a surface-mountable temperature sensor” makes the claim language confusing because this limitation appears to refer to an additional temperature sensor in the temperature measuring device recited in claim 4, which is inconsistent with the disclosure. Please clarify.

Similarly, the limitation “a temperature sensor” recited in line 2 of claim 5 makes the claim language confusing because it appears to recite an additional temperature sensor in the claimed temperature measuring device.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 1-4, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gysling et al. [hereinafter Gysling] in view of Peel et al. [hereinafter Peel].

Gysling discloses a temperature sensing device for measuring the temperature of a fluid flowing through a tube comprising: an optical temperature sensor [18] i.e., fiber Bragg grating, securely attached to an outer side of a central tube section so as not to shift radially or axially, the temperature sensor being outwardly protected by a hollow housing [22] that surrounds the tube section with a spacing therefrom, and a connection cable [40] electrically and mechanically affixed to the temperature sensor and guided through an opening [38] of the housing.

Said tube section provided with the temperature sensor is positioned axially in the housing using two spaced apart rings/bosses [32, 34], said housing is sheathed-shaped and said temperature sensor is surface-mountable and is mounted on the tube section as is shown in Figure 2.

Gysling fails to disclose said temperature sensor being an electric temperature sensor, wherein the temperature sensor is mounted on strip conductors on the outer side of the tube section using a thermally and electrically good-conducting paste.

Peel shows a temperature sensor arrangement in which the sensor leads [30, 32] serve to secure a temperature sensor i.e., thermocouple or thermistor disposed in antenna filial [18], onto an antenna while also serving as the conductors for the thermistor [94]. Said leads are attached to the antenna by epoxy.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the optical temperature sensor of the temperature measuring device disclosed by Gysling for an electric temperature sensor mounted on strip conductors on

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the outer side of the tube section using a thermally and electrically good conducting paste, such as epoxy, as taught by Peel, said conductors being connected to a connection cable extending from the opening of the housing, since both temperature sensor configurations will perform the same function, if one is replaced by the other, of providing a temperature measurement of the fluid in the tube, and in order to simplify the processing arrangement required for the signal from the temperature sensor thereby decreasing manufacturing costs.

With respect to the limitations of claim 6 and claim 11: These limitations, although proper, are insufficient to patentably distinguish the claimed temperature measuring device from the prior art because they are not directed to limitations of the measuring device but to particular features of the object from which temperature is to be measured. In this case, Gysling does disclose the use of the temperature measuring device for measuring the temperature of fluid in a tube and hence, it is considered that the particular material of the tube and the structures connected to the ends of the tube section on which the measuring device is provided do not serve to further limit the structure of the temperature measuring device itself.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gysling in view of Peel as applied to claims 1-4, 6 and 11 above, and further in view of Tamai et al. [hereinafter Tamai].

Gysling and Peel together disclose a temperature measuring device as claimed, as stated above in paragraph 10, but fail to disclose said electric temperature sensor being a platinum thin film resistor.

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However, Tamai teaches that thermistors, thermocouples and platinum resistors are among the temperature sensing elements commonly selected for fluid temperature measurements.

Therefore, at the time the invention was made, one of ordinary skill in the art would consider a choice of design the selection of a platinum thin film resistor as the electric temperature sensor in the measuring device of the combination of Gysling and Peel since, as taught by Tamai, it is among the sensing elements commonly used for performing fluid temperature measurements.

12. Claims ~~7-9~~¹⁰ are rejected under 35 U.S.C. 103(a) as being unpatentable over Gysling in view of Peel as applied to claims 1-4, 6 and 11 above, and further in view of Stulen et al. [hereinafter Stulen].

Gysling and Peel together disclose a temperature measuring device as claimed, as stated above, but fail to disclose said housing comprising two semi-cylindrical constructed parts connected to each other via a flexible foil hinge having a pivot axis which runs parallel to an axis of the tube section and wherein, diametrically opposed the foil hinge, a sealing device is provided, formed by at least one hook on the first housing part that catches in a recess of an opposing housing part and wherein the connection cable at its end seen in axial direction is clamped in form-fitting manner along a separation line of the two housing parts between the two hooks.

Stulen shows an apparatus for measuring physical characteristics in a pipeline, including temperature sensors enclosed in a cylindrical housing and, during operation, placed in contact with the pipeline. Said housing is a sheath-shaped housing comprising two cylindrical

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constructed parts [38] connected by a hinge, as shown in Figure 2, and provided with a sealing device formed by a pair of hooks that catch in a pair of recesses/groves on an opposing housing part.

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to modify the configuration of the housing of the measuring device disclosed by Gysling and Peel, to comprise two semicylindrical parts connected to each other via a hinge and provided with a sealing device, as taught by Stulen, in order to facilitate installation and removal of the measuring device.

Furthermore, at the time the invention was made, one of ordinary skill in the art would consider changing the particular location of the opening provided for the connection cable in the measuring device resulting from the combination of Gysling, Peel and Stulen, from parallel to the axis of the tube, as shown by Gysling, to a position along a separation line of the two housing parts between the two hooks is considered to be an obvious variation since the courts have held that there is no invention in shifting the position of a structure to a different position if the operation of the device would not be thereby modified. In re Japikse, 86 USPQ 70 (CCPA 1950).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bourgeon et al. disclose a method and device for measuring the temperature of the primary coolant fluid of nuclear reactor. Ku discloses a temperature sensing device for testing a cylinder. Fero et al. disclose an apparatus for passive contact between temperature measurements. Keller et al. disclose a temperature indicating device. Gambill et al. disclose a temperature sensor. Drouet discloses a device for measuring the temperature of a hot wall.

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Moninger thermometer receptacle for attachment to pipes. Davis discloses an apparatus for measuring temperature of a pipe. Pawelzik et al. disclose a battery powered temperature indicator for a faucet. Parker et al. disclose a temperature transducer assembly. Barkley et al. disclose a heater tube skin thermocouple. Hauser et al. disclose a device for measuring heat flux. Shwarz discloses a temperature indicator. Faries, Jr. et al. disclose a temperature sensing device for measuring temperature at desired locations along an intravenous fluid line.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia M. De Jesús whose telephone number is (703) 306-5982.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



LDJ
September 13, 2002

Diego F.F. Gutierrez
Supervisory Patent Examiner
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